TYLER F ROBERTS

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EDUCATION:

Oregon State University, Corvallis, Oregon

Major: B.S. Chemical Engineering (Expected: June 2010)

Summa Cum Laude

Minor: Mathematics

HONORS AND ACTIVITIES:

- Lab Director/Mentor for *Summer Experience in Science and Engineering for Youths* at OSU (SESEY).
- National Scholars Honor Society
- American Institute of Chemical Engineers (AIChE)
- Society of Industrial and Applied Mathematicians (SIAM)

RESEARCH/LABORATORY EXPERIENCE:

- Research Assistant (NSF REU) , Oregon State University, Summer 2009 to Present
  - Goal was to investigate zinc oxide nanowire morphology as a function of growth parameters. Wires were synthesized via hydrothermal methods in a research grade microwave. Using design of experiment, SEM imaging and statistical analysis determined what nanowire features appeared controllable using this method.
    Professor: Dr. John Conley Jr, Electrical Engineering
- Research Assistant, Oregon State University, Fall 2009 to Present
  - Investigation of critical phase phenomena with Renormalization Group techniques. Used Maple to investigate parameter flow in Ising models. Research still under progress.
    Professor: Dr. Glenn Evans, Chemistry.
  - Research Assistant, Oregon State University, Winter/Spring 2008/09
  - Understand how hydrothermal zinc oxide thin films could create non-reflective surfaces on various substrates. Using a spectrometer to measure absorbance and % transmittance, group was able to determine correlation between thin film thickness and non-reflective properties.
    Professor: Dr. Alex Chang, Chemical Engineering.

TEACHER ASSISTANT EXPERIENCE:

- Teaching Assistant, Oregon State University 2009-10
  Held office hours, graded homework and tests for Physical Chemistry Sequence (CH/440-442).
  Professor: Dr Glenn Evans

PUBLICATIONS:

Mason AD, Roberts TF, Conley Jr JF, *et al.*; "*Investigation of Growth Parameter Influence on Hydrothermally Grown ZnO Nanowires Using a Research Grade Microwave*" International Semiconductor Device Research Symposium 2009-2010.

ELECTIVES/MATH MINOR COURSES:

Mathematics -Systems of Ordinary Differential Equations, Advanced Calculus, Computational Number Theory, Differential Geometry,
Material Science -Semiconductor Device Fundamentals, Polymer Engineering & Science.

References available upon request